

### ABSTRACT OF THE DISCLOSURE

A temperature-protected semiconductor switch having a semiconductor switch element composed of a number of cells connected in parallel and an integrated reverse diode, and further having a temperature sensor wherein the semiconductor switch element and the temperature sensor are integrated together in a semiconductor body of a first conductivity type. Upon occurrence of an excess temperature, the temperature sensor generates a first signal. A charge carrier detector is also provided which generates a second signal given the occurrence of free charge carriers caused by the integrated reverse diode in the semiconductor body. The first and second signals are supplied to an evaluation means that, for example, undertakes the shut-off of the semiconductor switch only in the case of a true excess temperature.